

## A NEW GENUS OF SEMI-AQUATIC HEMIPTERA.

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For several years I have had in my possession a bug that was collected for me in Ecuador by my friend Doctor F. X. Williams. This insect to which I had assigned the manuscript name *Mesoveloidea williamsi* genus and species new has been most perplexing because it does not fit satisfactorily the diagnosis of any family and I have delayed describing it for that reason. Last year I took one of the specimens to Doctor Horváth in Budapest who examined it briefly and made the suggestion that it is probably nearer the genus *Mesovelina* than any other. These two interesting specimens were packed in with some Rhagovelias between layers of white velvet in a small pasteboard pill box. When they were mounted they were found to have lost some of their appendages. A search in the box was rewarded with the discovery of some parts which I believe must have belonged to these insects. I am submitting drawings of these parts. Fortunately some of the limbs were still attached to the insects.

One specimen is a winged female and is about the general size and shape of *Mesovelina bisignata* Uhler but in our keys it runs directly to Veliidae because of the antepical position of the tarsal claws. The short head and venation of the hemelytra might place it near the *Microvelina* but the large scutellum and abdomen fashioned to accommodate an ovipositor for the insertion of the eggs into plant tissues promptly negate such a kinship. I am aware, of course, that the ovipositor may not be sufficient to remove it from the Veliidae for the *Rheumatobates* females insert their eggs in plant tissues while all the other Gerrids known to me do not. Nevertheless the possession of a large exposed scutellum is not a characteristic of either the Veliidae or the Gerridae and lead me to assign the insect tentatively to the family Mesoveliidae. My specimens are not entire and the discovery of more individuals may assist in determining its proper relationship.

**Mesoveloidea** gen. n.

Small bugs having general shape of *Mesovelina* but with short declivent heads and the antenniferous tubercles close to the eyes. Beak long, slender and three segmented. Ocelli

of winged form obsolete or lacking. Scutellum large, triangular and flat. A single median scent gland pore on the dorsum of the fourth abdominal segment as in *Mesovelia*. Female provided with an ovipositor for inserting eggs in tissues. Coxae elongate—middle pair midway between front and rear, the meta-coxae longest. Hind femora not attaining tip of ovipositor sheath. Front tarsi three-segmented with claws anteapical. Hemelytra membranous with three longitudinal veins the anterior one on the margin; three closed cells; two long slender cells in corium the second one slightly longer than the first and nearly divided; the distal cell reaching the middle of the membrane and ending in a strong vein that does not attain the margin of the membrane.

**Mesoveloidea williamsi** sp. n.

*Size:* Length 3.8 mm.; width across head .75 mm.; width across humeri 1.32 mm.

*Color:* Head and anterior one-fourth of the pronotum yellow, remainder of pronotum and scutellum metallic bluish black with a coppery sheen in sunlight. Hemelytra smoky with prominent veins brown. Thorax and abdominal venter purplish brown the thorax covered with a gray bloom. The basal abdominal segments smooth and shiny the genital segments pilose and lighter in color. Beak, antennae, acetabula and legs yellow—the acetabula slightly lighter.

*Structural characteristics:* Head with short vertex and declivity front, antennae arising close to margin of eyes. First antennal segment fairly stout, slightly curved and its distal end attaining the front of the humeri, as long as the lateral margin of the pronotum. Antennal formula: 1st: 2nd: 3rd: 4th: :3:2.6:3.3:? Eyes small and coarsely faceted. Beak attaining the base of the hind coxae. Humeri of pronotum very slightly raised, lateral margins of pronotum straight, diverging from head to humeri, the margins rounded. Pronotum nearly flat. Scutellum triangular, flat—both clothed with short depressed pale hairs. Scutellum one-half length of pronotum and wider at base than long. Last dorsal abdominal segment broad and truncate at caudal end. Front legs short. Femur:tibia:tarsus::4.5:3.6:1.6. Front tarsus with terminal segment large and longer than the other two together. Hind femora in length are to the front femora as 7.5:4.5, and in diameter much greater. Limbs with some hairs but few spines.

Described from two female specimens from Mera, Ecuador, South America and taken by Doctor F. X. Williams February

3, 1923. This species is the type of the new genus *Mesoveloidea*. Doctor O. M. Reuter in his "Neue Beiträge zur Phylogenie der Heteropteren Familien" removed the Mesoveliidae from a position with the families of semi-aquatics to one between the Reduviidae and Nabidae. This position has been followed by Van Duzee in his splendid catalog and by others in this country who have published manuals on the Hemiptera. Nevertheless, I believe this form to be a connecting link between the Mesoveliidae and the Veliidae.

Concerning the region of Ecuador in which these most interesting insects were found, I am pleased to quote from a letter from my friend Doctor Williams: "Leaving Baños which is situated at 6000 feet on the east slope of the Andes, the trail further east lies along the Pastasa river as far as Mera, at 4,000 feet. At first the walking is pleasant as the path lies among granite or granite-like rocks. Here are some very large and beautiful terrestrial orchids, and as one descends, the tropics are becoming more and more apparent, for one can hardly call Baños tropical. Mera is a village of some 10 houses perched high up on the banks of the more or less navigable Pastasa, and is buried in virgin forest. It is an exceedingly wet region and the walking is mainly execrable. The palms about here have numerous rigid prop roots to meet the moist conditions. Little surface water bugs are found everywhere, even in footprints. Trees are loaded with epiphytes, particularly Araceae and Bromeliaceae. Some of the palms are 100 feet tall and only 8 or 9 inches thick at the prop roots."

#### PLATE XXVII.

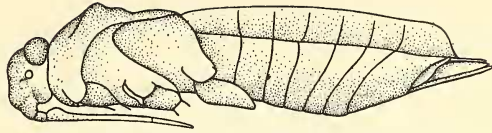
##### *A New Genus of Semi-Aquatic Hemiptera.*

- Figure I. Front leg of *Mesoveloidea williamsi* genus and species new.
- Figure II. Side view of female. Note the insertion of antenna below the eye and the character of the abdomen.
- Figure III. Middle leg.
- Figure IV. Hind leg.
- Figure V. Hind tarsus.
- Figure VI. *Mesoveloidea williamsi* genus and species new. Dorsal view. Note the short head, the flat scutellum, the wing venation and the dorsal abdominal scent gland pore.

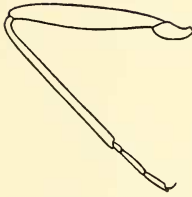
All of the above drawings, except Figure V, are made to the same scale by Miss Kathleen Doering.



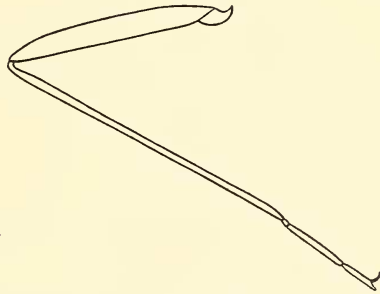
1 Front leg



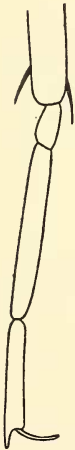
2 *Mesoveloidea williamsi* genus and species new



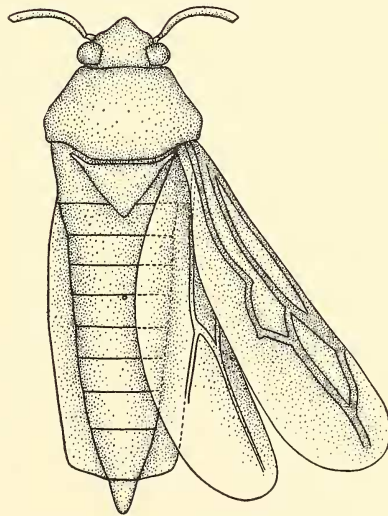
3 Middle leg



4 Hind leg



5 Hind tarsus



6 *Mesoveloidea williamsi* genus and species new